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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,934	02/20/2004	Daniel Watson	1157.06	7268

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EXAMINER

MILLER, DANIEL H

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,934

Applicant(s)

WATSON, DANIEL

Examiner

Daniel Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/18/2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerutti et al (U.S. 5,512,235) in view of Brunson.

1. Regarding claim 1, Cerutti teaches a thermally treated (HT) carbide material (abstract), useful as a cutting tool (column 1 line 5-35). The process limitations of claim 1 are not indicative of patentability of the material or article where a substantially similar final product is taught. Regarding claim 2, the carbide is a metal carbide support layer (abstract). Regarding claim 3, the carbide may comprise titanium, tungsten, cobalt, iron, and combinations there of (column 6 line 35-42). Regarding claim 4, the carbide may be made from powder (column 6 line 42-45). Regarding claim 5, the carbide is sinterable and cemented together (column 6 line 35-50). The carbide can be used with an iron alloy binder (precipitate). Regarding claims 7-17, only process limitations are recited which are not indicative of the patentability of the final product where the final product is taught by the reference. Regarding claims 18-25, the carbide is a laminate where it is bonded to a polycrystalline structured diamond (second material) and the carbide is laminated to a ceramic CBN (cubic boron nitride) layer making it a coating (column 5

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and 6 and figures). Regarding claim 23-24, the carbide is in a binder comprising iron or an iron alloy or mixtures thereof. However, in light of applicant's submitted affidavit the article is silent as to the processing techniques employed by applicant which are deemed to produce a different product than the process of Cerutti.

2. Brunson teaches a method of deep cryogenic treatment (abstract). Brunson teaches that the process is useful for cutting tools to improve wear resistance [0003]. The process uses a cryogenic chamber to lower the articles temperature to -300 degrees Ferinheht from an ambient temperature and holds temperature at -300 F for a period of time then raises the temperature to 300 degrees F and holds at that temperature for a period of time, then allowing the temperature to come back to ambient temperatures (see claim 1). This process has overlapping temperature ranges with applicant's claimed process. The difference being that applicant repeats the process a second time. It is the examiners position that repetition of this process would have a cumulative effect of improved wear resistance.

3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cerutti to employ the process of Brunson in order to obtain a cutting tool with improved wear resistance.

Response to Arguments

4. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection. However, applicant's affidavit has been carefully considered and patentable weight has been given to the process steps claimed

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by applicant in the product by process claims to the extent to which the carbide claimed by applicant is different than the carbide as produced by the method of Cerutti US'235.

See rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Miller whose telephone number is (571)272-1534. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571)272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Miller



JENNIFER C. MCNEIL
SUPERVISORY PATENT EXAMINER

9/20/06